

UPDATED RIDER CL TO EXAMINED USSN 10/042,678 OF 08/02/04

CLAIMS

1. (Currently amended) In a continuous mixer apparatus adapted for commingling of particulate thermoplastic materials of varying polymeric compositions, having a mixer barrel, at least one main rotor with a helical profile body section, a driven journal located at the opposite end, a drive end rotor pilot component, a drive end, packing seal retainer, and a drive end visco seal assembly, and a packing gland seal means, further comprising a sleeve assembly, a metallic liner adjacent the sleeve assembly, a circular visco seal, a packing component disposed about the periphery of the visco seal, and a packing seal retainer component for the sleeve subassembly adapted for compressing the packing component, the improvement being in the pneumatic housing component which comprises:

- (a) an annular channel provided substantially centrally of the inner periphery of the pneumatic housing being defined by the component inner periphery and the opposing outer periphery of the visco seal;
- (b) an at least one elongate fluid conduit adapted for pneumatic air supply to the pneumatic housing component connecting between the annular channel and the outer periphery of the visco seal; and,
- (c) a pair of lip seal packing components further defining the annular channel of the pneumatic housing and positioned spaced apart on the opposing surfaces of a peripheral annular ridge provided on the inner periphery of the pneumatic seal housing;
- (d) a means for supply of pneumatic air to the external end of the fluid conduit; and,

(e) the outer periphery of the pneumatic housing is provided with a truncated segment presenting a planar surface adapted to abut another pneumatic housing located on an adjacent main rotor.

2. (Currently amended) The improved pneumatic housing of Claim 1 wherein each lip oil seal component has a substantially squared cross section.

3. (Earlier amended) The improved pneumatic housing of Claim 1 wherein each seal component is of a material selected from one of the fluoroelastomers with a repeating structure -CF₃-CH₂-CF₂-CF(CF₃)-.

4. (Canceled) The pneumatic housing component of Claim 1 in which the inner periphery thereof is adapted to receive the outer flat surface a visco seal so that the lip seal components can ride thereon.

5. (Withdrawn) The pneumatic housing component of Claim 1 wherein the outer periphery thereof is provided with a truncated segment presenting a planar surface adapted to abut another pneumatic housing located on an abutting main rotor.

6. (Currently Amended) The pneumatic housing component of Claim 1 wherein the oil seal retainer and opposing visco seal components are configured so as to provide an annular-shaped, port about the drive end sub-assembly, whereby a positive air pressure supply can be directed from an external source to the pneumatic housing annular channel, so as to provide for continuous fluid air purgation of the drive end, visco seal assembly in operation.

7. (Earlier Amended) The pneumatic housing component of Claim 6 wherein the fluid conduit is aligned radially within the port of the upstream pneumatic Visco seal assembly.

8. (Canceled) In a continuous mixer apparatus adapted for commingling of particulate thermoplastic materials of varying polymeric compositions, and having a mixer barrel, at least one main rotor with a helical profile body section at one end thereof, a driven journal located at an opposite drive end thereof, a drive end rotor plate, a drive end packing seal retainer, and a packing gland seal means at the drive end, the improvement in the packing gland seal means which comprises:

- (a) a bushing-like, visco sleeve assembly having a cylindrical inner surface being provided with an integral continuous, first peripheral annular ridge located proximal to one longitudinal end of the sleeve assembly, which one end is distal from the helical profile body;
- (b) a double, oil seal sleeve-shaped, metallic liner positioned adjacent the inner periphery of the sleeve assembly;
- (c) a sleeve-like, circular visco seal, being stepped-down intermediate the ends thereof having first and second cylindrical peripheries, with the lesser diameter, periphery seal being located distal from the helical profile body section, and with the larger diameter periphery seal being provided with a visco seal threading, and with the sleeve assembly and circular visco seal defining an annulus-type inner chamber therebetween;
- (d) a single, rope-like first packing component positioned about the visco seal periphery and abutting the annular ridge of the sleeve subassembly; and
- (e) said oil seal retainer being L-shaped and positioned adjacent the sleeve subassembly and also abutting and compressing laterally the first oil component.